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ABSTRACT

The Type A behavior pattern, an independent risk factor for coronary heart disease, has been characterized as a response style for coping with perceived threats to control. Recent research suggests that self-attributional biases may play a role in the Type A's sensitivity to loss of control. Attributional mediation of Type A's experience of stress was explored using Type A and B males (N=40) who performed a problem solving task and were led to believe that their correct responses would reduce the number of aversive noise bursts they heard. While all subjects heard the same amount of noise, half received contingent failure performance (Perceived Control, PC), and half received noncontingent failure performance feedback (No Perceived Control, NPC). While there were no differences in attributions that Type A's and B's made for their performance in the PC condition, in the NPC condition, Type A's made more extreme self-attributions, and perceived the noise bursts as more stressful than PNC B's. The results for performance revealed a possible trend of Type A's to manifest performance decrements on a similar task, whereas Type B's did not. Both Type A's and B's appeared to show facilitated performance in the NPC condition on a different task. The results suggest that attributional differences between Type A's and B's contribute to their differential responses to loss of control. (Author/JAC)

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REACTIONS TO PERCEIVED LOSS OF CONTROL:

SELF-ATTRIBUTION AND THE TYPE A

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ABSTRACT

THE TYPE A BEHAVIOR PATTERN, AN INDEPENDENT RISK FACTOR FOR CORONARY HEART DISEASE, HAS BEEN CHARACTERIZED AS A RESPONSE STYLE FOR COPING WITH PERCEIVED THREATS TO CONTROL. RECENT RESEARCH SUGGESTS THAT SELF-ATTRIBUTIONAL BIASES MAY PLAY A ROLE IN THE TYPE AS' SENSITIVITY TO LOSS OF CONTROL. ATTRIBUTIONAL MEDIATION OF TYPE AS' EXPERIENCE OF STRESS WERE EXPLORED IN THE PRESENT STUDY. TYPE A AND B MALES PERFORMED A PROBLEM SOLVING TASK AND WERE LED TO BELIEVE THAT THEIR CORRECT RESPONSES WOULD REDUCE THE NUMBER OF AVERSIVE NOISE BURSTS THEY HEARD. WHILE ALL SUBJECTS HEARD THE SAME AMOUNT OF NOISE, HALF RECEIVED CONTINGENT PERFORMANCE FEEDBACK (PERCEIVED CONTROL, PC), AND HALF RECEIVED NONCONTINGENT FAILURE PERFORMANCE FEEDBACK (NO PERCEIVED CONTROL, NPC). THE SUBJECTS' ATTRIBUTION FOR PERFORMANCE, PERCEIVED STRESS, PERFORMANCE ON A SIMILAR TASK, AND PERFORMANCE ON AN UNRELATED TASK WERE ASSESSED.

WHILE THERE WERE NO DIFFERENCES BETWEEN THE ATTRIBUTIONS THAT TYPE AS AND BS MADE FOR THEIR PERFORMANCE IN THE PC CONDITION, IN THE NPC CONDITION, TYPE AS MADE MORE EXTREME SELF-ATTRIBUTIONS THAN TYPE BS. SIMILARLY, IN THE NPC CONDITION, TYPE AS PERCEIVED THE NOISE BURSTS AS MORE STRESSFUL THAN NPC BS. THE RESULTS FOR PERFORMANCE REVEALED A POSSIBLE TREND OF TYPE AS TO MANIFEST PERFORMANCE DECREMENTS ON A SIMILAR TASK, WHEREAS TYPE BS DID NOT. BOTH TYPE AS AND BS APPEARED TO SHOW FACILITATED PERFORMANCE IN THE NPC CONDITION ON A DIFFERENT TASK.

THESE RESULTS SUGGEST THAT ATTRIBUTIONAL DIFFERENCES BETWEEN TYPE AS AND BS CONTRIBUTE TO THEIR DIFFERENTIAL RESPONSES TO LOSS OF CONTROL.

INTRODUCTION

THE TYPE A BEHAVIOR PATTERN, AN INDEPENDENT RISK FACTOR FOR CORONARY HEART DISEASE, HAS BEEN CHARACTERIZED AS A BEHAVIORAL STYLE FOR COPING WITH PERCEIVED THREATS TO CONTROL (GLASS, 1977). IT HAS BEEN SHOWN THAT RELATIVE TO TYPE BS, TYPE AS WILL INCREASE EFFORT IN THE FACE OF UNCONTROLLABLE STRESSORS. HOWEVER, AFTER EXTENDED PERIODS OF UNCONTROLLABLE STRESS, TYPE AS SHOW A DRAMATIC DECLINE IN ATTEMPTS TO INITIATE CONTROLLING RESPONSES (GLASS, 1977). ON THE OTHER HAND, TYPE BS DO NOT EXHIBIT EITHER THE SAME MAGNITUDE OF INCREASED INITIAL RESPONDING, OR AS EXTREME LATER DEFICITS WHEN EXPOSED TO UNCONTROLLABLE STRESS.

THE PURPOSE OF THIS RESEARCH WAS TO FURTHER EXAMINE THE NOTION THAT THE SPECIFIC KIND OF ATTRIBUTION AN INDIVIDUAL MAKES FOR AN OUTCOME PLAYS AN IMPORTANT ROLE IN REACTIONS TO LOSS OF CONTROL (MORTMAN, PANCIERA, SHUSTERMAN, & HIBSCHER, 1976; ABRAMSON, SELIGMAN, & TEASDALE, 1978; HANUSA, & SCHULZ, 1977). AN ATTEMPT WAS MADE TO EXAMINE THE ROLE OF SELF-ATTRIBUTION AS A MEDIATING VARIABLE BETWEEN THE TYPE A BEHAVIOR PATTERN AND REACTIONS TO LOSS OF CONTROL IN THE LEARNED HELPLESSNESS PARADIGM. SPECIFICALLY, THIS STUDY TESTED THE HYPOTHESIS THAT THE EFFECTS OF LACK OF CONTROL IN TERMS OF PERCEIVED STRESSFULNESS AND SUBSEQUENT PERFORMANCE ARE NOT FUNCTIONS OF THE LOSS OF CONTROL PER SE, BUT RATHER, THE CONSEQUENCES OF THE ATTRIBUTION THE INDIVIDUAL MAKES FOR FAILURE AS A FUNCTION OF THE CORONARY-PRONE BEHAVIOR PATTERN. IT WAS PREDICTED THE TYPE AS' ATTRIBUTIONAL BIAS TO SEE THEMSELVES AS CAUSAL FOR EVENTS AND OUTCOMES IN THEIR ENVIRONMENT MAKES CONTROL MORE OF AN ISSUE FOR THEM AND THE LOSS OF CONTROL MORE STRESSFUL THAN IT IS FOR TYPE BS. MOREOVER, IT WAS PREDICTED THAT ATTRIBUTIONS TO THE SELF MAY LEAD THE INDIVIDUAL TO SHOW INCREASED EFFORT OR ATTEMPTS AT MASTERY ON SUBSEQUENT TASKS.

METHOD

FORTY MALES WERE ASSIGNED RANDOMLY TO ONE OF THE TWO EXPERIMENTAL CONDITIONS. IN BOTH THE PERCEIVED CONTROL (PC) AND THE NO PERCEIVED CONTROL (NPC) CONDITIONS, SUBJECTS WERE ASKED TO SOLVE 12 EMBEDDED FIGURES TASKS. THEY WERE TOLD THAT GOOD PERFORMANCE WILL RESULT IN A DECREASE IN THE AMOUNT OF AVERSIVE NOISE THEY WILL HEAR. THEIR PERFORMANCE WAS MEASURED ON THOSE 12 TASKS. IN THE PC CONDITION, SUBJECTS WERE GIVEN CONTINGENT FEEDBACK ABOUT THEIR PERFORMANCE. IN THE NPC CONDITION, THEY WERE GIVEN NONCONTINGENT FAILURE FEEDBACK. THE SUBJECTS THEN SOLVED EIGHT MORE SIMILAR PROBLEMS WHERE THEIR PERFORMANCE WAS AGAIN RECORDED, AND THEY RESPONDED TO A QUESTIONNAIRE ABOUT PERCEIVED STRESS AND ATTRIBUTION. SUBJECTS IN BOTH CONDITIONS THEN PARTICIPATED IN A SECOND, OSTENSIBLY UNRELATED EXPERIMENT WHERE THEIR PERFORMANCE ON SOLVING GEOMETRIC PUZZLES WAS MEASURED.

RESULTS

IN THE PC CONDITION, WHERE THERE WERE NO THREATS TO CONTROL, BOTH TYPE AS AND BS MADE SLIGHTLY EXTERNAL ATTRIBUTIONS ABOUT THEIR PERFORMANCE. HOWEVER, TYPE AS IN THE NPC CONDITION BECAME MORE EXTREME IN THEIR SELF-ATTRIBUTIONS, WHEREAS TYPE BS MADE MORE EXTERNAL ATTRIBUTIONS RELATIVE TO THEIR PC COUNTERPARTS (SEE TABLE 1). A PLANNED COMPARISON REVEALED THAT IN THE NPC CONDITION, TYPE AS SELF-ATTRIBUTED THEIR FAILURE TO A GREATER EXTENT THAN NPC TYPE BS ($F(1,36) = 5.51, p < .05$). THE MARGINAL INTERACTION BETWEEN TYPE A-B AND CONDITION ALSO REFLECTS THIS TREND ($F(1,36) = 3.18, p < .08$).

AS PREDICTED, WHEN THERE WAS NO THREAT TO CONTROL (PC), TYPE AS AND BS DID NOT DIFFER IN THEIR PERCEPTION OF HOW STRESSFUL THE NOISE BURSTS WERE (SEE TABLE 1). HOWEVER, IN THE NPC CONDITION, WHEN A THREAT TO CONTROL WAS INTRODUCED, TYPE AS PERCEIVED THE NOISE BURSTS AS SIGNIFICANTLY MORE STRESSFUL THAN NPC TYPE BS ($F(1,36) = 7.23, p < .05$) (SEE TABLE 1).

THE PERFORMANCE RESULTS WERE LESS CLEARLY INTERPRETABLE. IN GENERAL, ON A TASK SIMILAR TO THE EXPERIMENTAL TASK, TYPE AS SHOWED PERFORMANCE DECREMENTS WHILE TYPE BS DID NOT ($F(1,36) = 9.81, p < .01$) (SEE TABLE 1). ON AN OSTENSIBLY UNRELATED TASK, BOTH NPC TYPE AS AND BS SHOWED FACILITATED PERFORMANCE RELATIVE TO THEIR PC COUNTERPARTS ($F(1,36) = 5.60, p < .05$). TYPE AS, HOWEVER, SHOWED SLIGHTLY LOWER PERFORMANCE THAN TYPE BS (SEE TABLE 1).

CONCLUSION

THE RESULTS OF THIS RESEARCH SUPPORT THE HYPOTHESIS THAT ATTRIBUTIONAL PROCESSES MODERATE DIFFERENCES IN THE PERCEPTIONS OF STRESS BETWEEN TYPE A AND B INDIVIDUALS. IN THIS EXPERIMENT, BOTH TYPE AS AND BS HEARD THE SAME AMOUNT OF NOISE. WHEN THERE WAS NO THREAT TO CONTROL (PC CONDITION), BOTH TYPE AS AND BS MADE SIMILAR ATTRIBUTIONS FOR THEIR PERFORMANCE AND REPORTED THE NOISE BURSTS TO BE MODERATELY STRESSFUL. HOWEVER, WHEN A THREAT TO CONTROL WAS INTRODUCED (NPC CONDITION), TYPE AS INTERNALLY ATTRIBUTED THEIR PERFORMANCE OUTCOMES, WHEREAS TYPE BS MADE EXTERNAL ATTRIBUTIONS. MORE IMPORTANTLY, ALTHOUGH BOTH AS AND BS WERE EXPOSED TO THE SAME ENVIRONMENTAL CONDITIONS, TYPE AS WHO SELF-ATTRIBUTED THEIR FAILURE TO CONTROL PERCEIVED THOSE CONDITIONS AS SIGNIFICANTLY MORE STRESSFUL THAN TYPE BS WHO SITUATIONALLY ATTRIBUTED THE SAME OUTCOME. IN ADDITION, IT APPEARED THAT THE TYPE AS' SELF-ATTRIBUTION FOR FAILURE LED THEM TO SHOW PERFORMANCE DECREMENTS ON A SIMILAR TASK. TYPE BS, IN CONTRAST, WHO SITUATIONALLY ATTRIBUTED THEIR PERFORMANCE DID NOT SHOW THE SAME DEFICITS.

PREVIOUS RESEARCH HAS DEMONSTRATED THAT THE TYPE AS RESPOND TO CHALLENGE OR THREATS TO THEIR SENSE OF CONTROL WITH A SET OF BEHAVIORAL AND PHYSIOLOGICAL RESPONSES THAT HAVE HARMFUL EFFECTS ON THE INDIVIDUAL'S CARDIOVASCULAR SYSTEM. THE PRESENT FINDINGS RAISE THE POSSIBILITY THAT BECAUSE OF ATTRIBUTIONAL BIASES TO VIEW THEMSELVES AS CAUSAL FOR NEGATIVE OUTCOMES, TYPE AS WILL FIND SITUATIONS THAT ARE NOT INHERENTLY STRESSFUL (AT LEAST TO TYPE BS) AS MUCH MORE AVERSIVE. IT IS SUGGESTED, THEN, THAT THE WAY IN WHICH THE TYPE AS CONSTRUE THEIR NEGATIVE OUTCOMES NOT ONLY TRIGGERS THE STRESSFUL TYPE A COPING RESPONSES, BUT ALSO INDEPENDENTLY CONTRIBUTES TO THE CUMULATIVE STRESSFULNESS OF THEIR LIVES.

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Table 1. Attributions for performance, perceived stress, and performance on similar and different tasks for Type A and Type B subjects.¹

	<u>Type A</u>				<u>Type B</u>			
	Attributions ²	Perceived Stress	Same Task Perf.	Different Task Perf.	Attributions	Perceived Stress	Same Task Perf.	Different Task Perf.
Perceived Control	-1.4	3.6	3.5	4.0	-1.2	3.6	1.5	3.7
No Perceived Control	0.4	4.6	2.3	4.7	-2.2	2.5	2.9	5.4

1 n=10/cell.

2 The higher the mean the greater the attribution to the self, the greater the perceived stress, and the better the performance.